Front-end Group - Support #17253

ftpread from HRM (linac arch.) acquires at about half the requested frequency for first N points, then at full rate

07/21/2017 01:24 PM - Dennis Nicklaus

Status:	Assigned	**Start date:**	07/21/2017
Priority:	Normal	**Due date:**	
Assignee:	Mike Slicznia k	**% Done:**	0%
Category:		**Estimated time:**	0.00 hour
Target version:			

Description

History

#1 - 07/21/2017 01:49 PM - Richard Neswold

- Status changed from New to Assigned

- Assignee set to Mike Slicznia k

Mike does the Linac support for HRMs.

#2 - 07/21/2017 01:53 PM - Dennis Nicklaus

Using the ACL ftpread command, I find some odd behaviour from linac-style HRMs.
For instance this ACL command:
device_list/create hammer devices='t:bhamd1, t:bhamd2, t:bhamd3, t:bhamd4';ftpread/rate=1000/duration=10/output=file:test4.dat devicelist=hammer
Results in the first 500 points of each device being acquired at ~500Hz, then after that it appears to go at the requested 1Khz.

This command
device_list/create hammer devices='t:bhamd1, t:bhamd2, t:bhamd3, t:bhamd4';ftpread/rate=100/duration=20/output=file:test4.dat devicelist=hammer
results in the first 70 points being acquired at ~50Hz, then continuing at 100Hz to the end

Another example:
ftpread/rate=1000/duration=10/output=file:test.dat t:bhamd1
Gives ~500Hz for the first 700 points, then 1000Hz after.
Sample data from that last command:

```
0           -4.275
.0018       -4.535
.0037       -4.746
.0055       -4.889
.0074       -4.975
.0093       -4.97
.0111       -4.884
...
1.2933      -4.19
1.2952      -4.478
1.2970001   -4.691
1.2989      -4.858
1.3006999   -4.959
1.3026      -4.985          <--- line 701. All seems at 1kHz from here on.
1.3036      -4.955
1.3046      -4.904
1.3056      -4.839
1.3066      -4.753
1.3076      -4.654
...
```

Details: I only tried this with these 4 devices from this one HRM. There's a sine wave going into the four channels used here.

NB:The "half" frequencies listed about by me are just from eyeballing the timestamps. It may be some other number around half.

#3 - 07/21/2017 01:59 PM - Dennis Nicklaus

- Subject changed from ftpread from HRM (linac arch.) acquires at 500Hz for first Nx100 points, then at 1kHz to ftpread from HRM (linac arch.) acquires at about half the requested frequency for first N points, then at full rate